BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. VIII.] WEDNESDAY, FEBRUARY 20, 1833. [NO. 2.

TREATMENT OF CROUP.

[THE following is the original statement which we published three years ago on this interesting subject. It first appeared in the London Lancet, and is from the pen of Mr. Surgeon Kemble, of Knowle, in Warwickshire. The success of this gentleman is represented to have been great.]

IN this district, the *croup*, from local causes, is unusually prevalent; and it has fallen to my lot, partly from the success of my plan of treatment, to witness more specimens than commonly occur to one person. We have also, at times, abundance of *bastard croup*. It is unnecessary here to dwell upon the symptoms, which, under the name of the former, do, with the ordinary treatment, so often lead to a fatal termination; but there can be no doubt that, if activity of 'antiphlogistic practice' and prompt attention only were requisite, the results would be far otherwise than they are reported to be, as there are very few infantile maladies to the rapidity and danger of which the public and the medical profession are more sensibly alive. I have been induced to think that the fatality in croup is mainly attributable to an erroneous pathology, and, consequently, to the misdirection of our attentions in the mode of treatment; and death appears to me to be produced, at least in the generality of instances, not by the systematic violence of the peculiar pellicular inflammation, nor by the often trifling quantity of plastic effusion which attends it, but to be directly owing to the spasm which is obviously present, and operative, at least to a certain extent, in every case. That the actual straitening of the oreal aperture by false membrane is not generally the cause of death, there cannot be much doubt. I have never witnessed an examination after death by croup, where an opening has been left, such as to lead those present to think it adequate to the further prolongation of life; and in the recorded cases of cynanche laryngea in adults, this circumstance is still more forcible, while it is a strong concurrent fact, repeatedly observed, that the fatality in croup is in no wise proportioned to the extent of the tube affected, but rather correspondent to its site; those cases being most grievous, rapid, and fatal, in which the inflammatory process is developed directly upon the apparatus for contraction. Again, that inflammation in an open passage, lined by mucous membrane, and occasionally so limited as to leave but slight traces after death, should proceed rapidly to a fatal termination, by its effects on the system, is unsupported by analogy, and would be a very remarkable occurrence in the history of disease. I am therefore led to conclude, that the peculiar complex condition which we denominate inflammation, is not, in croup, the principal cause of death.

To preclude the admission of noxious bodies, nature has endowed the entrance of the lungs with a degree of irritability, very exquisite, even in the healthiest state. A morbid increase, or exaltation of the natural irritability, accompanied with afflux (whether cause or consequence), and the symptoms arising from these two states, constitute inflammation. Morbid irritability, occurring in the muscular and musculo-ligamentous tissues, exhibits those phenomena of abnormal and irregular contraction, which we call spasm. Without canvassing their specific nature and difference, or the reciprocal power of each to produce the other in every case, it is evident that spasm is of very frequent occurrence in textures immediately subjacent to an inflamed organ, or associated with it in office. Whenever the mucous lining, or other texture near the extremity of an open passage, is inflamed, the muscles connected with it, and particularly those subservient to its closure, are sure to partake of the spasmodic condition. Inflammation of the urethra, inflammation of the neck of the bladder, and abscess in the vicinity of the rectum, are obvious examples; and the levator, the acceleratores, and the sphincters, are excited to frequent and irregular contractions. The natural and morbid irritability of parts are, I believe, pretty generally, in a direct ratio to each other, exclusive of circumstances of situation.

In the part attacked by the croup, the natural aptitude to contract every moment, for the purposes of self-preservation, is much greater than in the rectum and urethra; the apparatus is more complicated; the function is vital. A brief interruption, in the other cases but of little moment, is here, by the non-expansion of the great pulmonary receptacle, an obstacle to the return from the head; from that cause, an increased portion of the ascending current, unable to penetrate the cranium, is diverted, by the superior laryngeal branches, to the parts before oppressed; and thus the reflected consequence of the contraction of the aperture of the glottis by a spasm, is to aggravate its primary cause—a specific inflammation of the mucous membrane; that secondary effect is productive of still further spasm, and, after repeated paroxysms, each depressing still lower the vital power, harassed by ineffectual cough, distressed for breath, and laboring at the heart, the little subject is destroyed. The immediate cause of death is a condition of the brain, which is inadequate to maintain the organic stimulation requisite for the continuance of those functions which constitute visible life; that state arises from non-oxygenation, the non-performance of which, in the very last act, is perhaps mainly to be referred to the presence of mucus, and in some degree, perhaps, to the peculiar effusion in the larynx and trachea.

From the preceding view it follows, that were it possible, by the maintenance of narcotization, by the free use of antispasmodics, or by their joint co-operation, to effect the removal of spasm, to prevent any vexation but that arising directly from the inflammatory process, its course would be rendered milder, and it would probably re-approach to the nature of the common catarrhal affection, with which it always appears to commence. Time would be gained to establish some control over the local action by the ordinary means; and, for the removal or consolidation of the lymph, nature might be freely trusted to her own resources. A trial of considerable magnitude has convinced me that this view is substantially correct. The supposition of the important influence of spasm,

derives confirmation from the success of the practice, which would be otherwise unaccountable. I am of opinion, that all the worst symptoms of the malady are attributable to the *spasm only*; that there is not anything in the specific nature of the action present, nor in the parts affected (excepting their great readiness to take on spasm), which should *necessarily* produce a very heavy mortality; and I feel satisfied that if, instead of combating inflammation, we resolutely, and from the commencement, address ourselves to subdue spasm, the termination of the great majority of the cases of croup will be far other than it has been. At all events, I can state distinctly, that in my hands the subjoined plan has been so remarkably fortunate, that I have scarcely seen a fatal case since it has been adopted; and it has been equally successful in the hands of other persons at a distance, who have been apprised of these facts. It possesses the rare advantage of making *no inroads upon the patient's strength*; for I have frequently seen a child play, and, to all appearance, as well as ever, *on the third day*, after having had all the symptoms of true croup. And it may well be demanded, Of how few children could that be said, if they were merely subjected to the ordinary treatment *without any malady*? Bleeding 'freely' with leeches, and perhaps from the arm, blistering the surface of the neck, applying caustic to the fauces, drastic purging, calomel by cart-loads, and antimony '*usque ad nauseam*,' are quite enough to exhaust the life of an irritable and delicate infant. I never bleed or blister a child in croup; I have never thought it requisite to do so, since I have adopted the plan alluded to, although such an auxiliary practice would be in no other respect incompatible, than as tending to invalidate the general strength. The treatment I allude to consists in confining the child to a uniform and rather warm temperature, giving an emetic of ipecacuanha, and, in an hour after, commencing the following mixture:—

R. Rad. Valerian. Pulv. 3ij.
Oxymel Scillæ 3i.
Tinct. Opii gtt. xx.
Aq. Dist. 3i. M.

I administer a teaspoonful every hour, if the child is from two to five years old: if from five to eight, every five-and-forty minutes, so as to maintain the anodyne effect of opium, and the sub-nauseating, expectorant, antispasmodic effects of the squill and valerian, until the symptoms are removed, which commonly happens in ten or twelve hours, and which I have never seen protracted beyond eight-and-forty. On their subsidence, I have, in general, given a brisk dose of calomel and jalap.

This plan will also be found exceedingly efficient in hooping cough; and I can state, that when it is uncomplicated with tubercular disease, I have found my method more certainly and more speedily of use than any of the numerous procedures which are usually recommended.

CROUP.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—About thirty years ago, when my attention was first turned particularly to the subject, the croup was justly considered, according to

the practice of that day, as one of the most incurable of all acute, febrile diseases. Probably not more than one patient in six recovered from the complaint. At the present time, though it is a malady that demands the earliest and closest attention, and consequently is still very dangerous, yet when circumstances are favorable for putting the most approved practice into complete operation, we rarely lose more than one case out of eight or ten. Our dependence is now upon *acrid, deobstruent emetics, calomel*, and *opium*.

When called to a child laboring under croup, I would instantly give from half a scruple to a scruple of calomel, to be immediately followed by an emetic of the following mixture.

℞ Tinct. Sanguinar. Canad.
Syrup. Scill. Marit. āā ʒj.
Decoct. Polygal. Seneg. ʒij.
Pulv. Ipecacuan.
Pulv. Sulph. Zinc. āā ʒij. M.

Half an ounce of this mixture is to be administered *perseveringly*, every five minutes, till *free* vomiting ensues. Instead of the calomel which I previously give, some eminent practitioners add three or four grains of turbeth mineral, as an efficient deobstruent, to the first dose of the acrid emetic mixture. The preparation, also, admits of a considerable variation, as respects the proportions of bloodroot, squill, and senega.

In ordinary cases, free vomiting always produces speedy, though often only transient, relief. As soon as this occurs, from three to five grains of calomel, combined with three to five minims of laudanum, or a sixth to a fourth of a grain of opium, are administered every hour or every two hours, till the force of the disease yields, or catharsis makes it necessary to lessen the quantity of calomel, or to suspend it altogether. Small doses of opium are necessary, till the recovery is established.

Every time that a paroxysm of difficult respiration and distress returns, the acrid emetic is again repeated, as at first. Indeed, it is generally necessary to repeat the emetic, occasionally, upon any unpleasant symptom supervening, till there is ejected a certain kind of *glairy mucus*, which, from its consistence, falls into the vessel, in a manner somewhat resembling melted lead or melted tin.

It is also well to give regularly, every hour, as much tincture of sanguinaria, or decoction of senega, as can well be borne without vomiting. Unless the disease is broken up by the first emetic, which is sometimes the case, it is indispensable to this method of practice that the patient be kept *uniformly* under the *antirritant* effect of opium.

I have often known mild cases to yield easily to calomel and opium, without any emetic; and they are frequently managed with sanguinaria, in decoction or tincture, or with senega, without calomel. But *opium, given regularly, so that a second dose is taken before the effect of the first is much diminished*, is indispensable in either case, if we would expect to arrive at anything like certainty in the treatment.

It is perhaps needless to remark, that we avail ourselves, according to circumstances, of the warm or hot bath, fomentations, liniments, sinapisms, epispastics, &c.; in a word, of all the common adjuvants.

The outline of this treatment is to be found in Professor Tully's Essay on Sanguinaria Canadensis (American Medical Recorder, Vol. 13, Jan. 1828).* It has been successfully practised by the most eminent physicians in this State, between twenty and thirty years; so that in this section of the country, croup, among the physicians who know how to treat it, is nearly as much divested of its terrors as is the case with the smallpox. We are enabled entirely to dispense with bleeding; and we consider antimonials, in every shape, as among the most doubtful, not to say exceptionable remedies. True, they sometimes succeed; but when they fail, they are apt to be attended with a peculiar irritation, which is generally as unmanageable as the original disease.

In my own practice, I adopted this treatment, in substance, in the year 1810, with very decided success, at a time when the croup was so prevalent that it amounted to a kind of epidemic.

I have but one further remark. In no disease are greater resolution, decision, and firmness, demanded. If the physician has the weakness to be more afraid of his remedies, particularly of opium, than he is of the disease, he can never be expected to treat this malady with success, but will be ever liable to lose a majority of his patients. SENEX.

Connecticut, February, 1833.

CASES OF SMALLPOX AT DEDHAM.

[THE attention of the public has been recently drawn to cases of this disease at Dedham, and the profession will find below an authentic history of them, which was sent us for publication in this Journal, by Dr. Stimson, the physician under whose care the patients were placed.—ED.]

Observations on Variola, Varioloid, and Vaccina, with Cases. By JEREMY STIMSON, of Dedham.

[Communicated for the Boston Medical and Surgical Journal.]

IN the description of the symptoms and appearances of the following cases of smallpox and varioloid, I have been very minute, as there are few physicians in the country, under fifty years of age, who have ever seen either, and that number is yearly increasing. There has not been a case of the former in this town, during forty years, previously to the one now described; of the latter, we have no evidence of its ever having before appeared. I would also add, that I had not seen a case of variola since I was in the hospital, forty years since, then a lad of but ten years of age, and never one of varioloid until the appearance of the present case.

Sunday evening, Jan. 6, 1833, I was called to James Cook, a young man of good constitution and habits, of about twenty-two years of age, in the employ of Mrs. Fisher Ames, of this village. He informed me that the day previous he had felt weak, languid and depressed; that day he had frequent creeping chills, pains universally, but more particularly in head, back and loins. In the back it was so severe, that while

* The importance of opium in croup is also distinctly noticed in Dr. Miner's Essay on Fevers, 1823. Though the practice may be new in Europe, it has long been well understood in many parts of this country, and employed with the most flattering success.

bleeding him he could not remain seated, but had to recline on the bed; nausea; skin hot and dry; pulse eighty. Had an emetic.

Monday morning, Jan. 7. Symptoms still severe, particularly sickness of stomach, and occasionally retching to vomit; in other respects much as yesterday. Had a cathartic of cal. and jalap, which was retained on the stomach and operated thoroughly.

Tuesday morning, Jan. 8. Pains slightly mitigated, skin hot and dry, pulse more frequent, nausea still troublesome, with redness of eyes; had effervescing powders, and small doses submur. hydrarg.

Wednesday morning, Jan. 9. Had a restless and rather sleepless night. At the time of my visit, all his painful sensations mitigated, nausea subsiding, redness of eyes increasing; also a general efflorescence, resembling rash, or more properly an erysipelatous blush, was diffused over the entire face and neck. Now, for the first time, he complained of soreness of throat; it was reddened, and somewhat inflamed, but differed from scarlatina anginosa both in the throat and efflorescence. It resembled that disease, however, more than any other that I had seen. Breath offensive, tongue thickly coated, pulse less frequent. Continued the alteratives; in the afternoon had cath. sennæ, and sulph. magnesia.

Thursday morning, Jan. 10. Had a more comfortable night; the efflorescence of a deeper and darker hue, extending over the chest as well as face and neck, resembling in color a boiled lobster more perfectly than anything else with which I can compare it. On passing my fingers over the efflorescence, it appeared as though the true skin was filled with mustard seed innumerable. I felt of other parts, where there was no discoloration, and the same sensation of mustard seed or small shot was presented to the touch. His breath more offensive, and a secretion from the mucous membrane of the mouth, resembling ptyalism, had taken place; said he was much better, fever abated, asked for something to eat, had a good appetite. It was now evident the disease was not scarlatina anginosa.

Friday morning, Jan. 11. Symptoms much as yesterday; the small shot were, however, becoming larger. I became anxious, as well as my patient, to know what the disease was. Could it be miliary fever? This false track I followed through the day, examining authorities at every leisure moment, and visited my patient again at evening, when I discovered some of the little hard pimples had protruded from the true skin, becoming conical, with a thin fluid at the point. I was now satisfied it was a disease that I had never before seen, and must wait for its further development before I could give it a name.

Saturday morning, Jan. 12. The appearance of the eruption had changed during the night astonishingly. The pimples had doubled in size; instead of being conical, they were broadened and flattened, some even indented. Where the efflorescence was, their bases were in juxtaposition, and would soon evidently press on each other. Those on the body and limbs were smaller, coming forth from the true skin, conical, hard at the base, with a watery point. The smallpox, of the confluent kind, now for the first time presented itself to my mind. I went immediately home for Dr. Fisher's plates of that disease, and returned with them to the bedside of my patient. I carefully compared the eruption

with the plates, and was fully satisfied I had to contend with variola in its most dreadful form. I immediately announced my opinion to the head of the family, requesting for the present it might not be made public; that the community must be satisfied, as well as ourselves, and the exposed protected, if possible, from the contagion. I desired that all ingress and egress might be carefully prevented, and proposed to proceed immediately to the city, procure kinepock matter, and bring back with me medical gentlemen fully acquainted with the disease. This plan was adopted, and I returned the same evening, accompanied by Drs. Fisher and Perry, who kindly consented to advise in the case. The disease had advanced rapidly during the day, and they unhesitatingly confirmed my opinion. Notice was now given to the selectmen, who immediately announced it to the public, and adopted every precautionary measure to prevent its spreading. But to return to the case.

Sunday morning, Jan. 13. Restless night, renewed chills, brain oppressed, mind wandering, the secondary fever evidently commenced. Tongue thickly coated, breath very offensive, increased soreness of throat, secretion from mucous membrane increased and more tenacious, mouth and throat filled with pustules, difficulty of utterance, voice hoarse. Pustules on face, neck, and chest, coalesced in patches; some the size of a cent, some less, and assuming a whitish or silvery color; those on the trunk and extremities, enlarging, rounding, and filling with fluid.

Mouday morning, Jan. 14. Night sleepless, brain still oppressed, the confluent patches enlarged, tongue swollen, difficulty of utterance increased, fetor peculiar and intolerable, eyes glued together, general enlargement or swelling of the whole face.

Tuesday, Wednesday, and Thursday. During these three days his mind was clear, fever less; could take liquid nourishment, though at times swallowed with great difficulty; entirely blind. The pock on his face, neck and chest, all united, forming one purulent mass, gradually drying, and on the evening of the 17th his face looked as if covered with a black mask. The pock, on his body, round, full, large and distinct, thick as they could stand without running together. Those on his legs and arms, feet and hands, on the last-named evening, had become nearly as large, full and plump, as those on the trunk, and as near each other as possible without inpinging one upon another; all of a good, bright, pearly color. His courage good, said he felt strong at the vitals; and we had some expectations he would survive it.

Friday morning, Jan. 18. Spoke with great difficulty; said he felt as well as yesterday, though more debilitated; mind clear, pulse more feeble; color of the pustules on trunk and limbs greatly changed, being of a purplish hue; feet and legs disposed to be cold. No medicine had been given for several days past, excepting occasionally a gentle cathartic; now tinct. cinchо. comp. with wine, beef tea, &c. &c. was prescribed. At 11 o'clock, A. M., called suddenly, found him in great distress in the epigastric region, groaned agonizingly, passed his hand over his breast, entreating relief. Had his senses perfectly, knew my voice when I spoke to him. Had taken wine, beef tea, &c. but not the bark; ordered laudanum to be repeated if necessary. The pock of a very dark purple. Died at half past 1, P. M.

The cause of this fatal disease is still a mystery. All the facts we can substantiate, are the following. He has lived in the family of Mrs. Ames, upwards of a year. Last September he visited his parents in Vermont, and returned about the middle of October. I questioned him on the subject; he answered me, I have no doubt, truly. Said he had never had either smallpox or kinepock; during his visit to his friends, had not heard the smallpox named by any one; brought home no articles of clothing other than he carried with him, with the exception of a pair or two of stockings and some other small articles his mother made for him. The female domestics aver that all his shirts, stockings, &c. were washed by them, the week of his return. This was nearly three months before the commencement of his sickness. He had been absent from Dedham but once since his return from Vermont; that was to the City of Boston, on the 10th of December, and he returned the same day. After his death I learned from the family that he purchased a second-hand camlet cloak at a slop shop, in Boston, at this visit, and wore it, they believe, for the first time, the Sunday following. We found a bill of the slop shop, but not of the cloak, among his papers. I have attempted to trace this fact, by calling at the shop answering to the bill from his pocket-book; but the keepers of the shop were in the habit of selling cloaks daily, and could recollect nothing about it. These are all the facts we have, as yet, on the subject. It is possible there was contagion in the cloak, and that he received the disease from that source; but we have no evidence on the subject. If permitted to conjecture, we should think it quite as probable he caught it from some transient person, passing through the town with the eruption of varioloid upon him, whom he accidentally met and spoke with, as in any other way.

Case II.—Hayden Austin, of good constitution and regular habits, aged about 30, watched with Cook on Friday night, January 11, in company with his sister Nancy. Left Saturday morning, before my arrival. It will be recollected this was the morning I pronounced Cook's disease variola. Austin had the vaccine, about ten years before, but had never been tested by a second inoculation.

Wednesday, Jan. 23, twelve days from the time of exposure, was taken sick. I saw him same day; symptoms, creeping chills, slight pain in head, back and limbs, pulse quickened, skin dry; taken together, indicating idiopathic fever: had an emetic.

Thursday, Jan. 24. Emetic had operated favorably; symptoms much as yesterday, though slightly mitigated: had a cathartic.

Friday, Jan. 25. Much better, skin moist and soft, said he was well. Directed the family, if any kind of eruption appeared, to notify me. Was called the same evening; an eruption had appeared. I examined it critically; there was no efflorescence. On the forehead, neck, and mostly between the shoulders, there were a few red points, about twenty in all, resembling a flea-bite, or the true vaccine vesicle on the third day. Not one had a hard base or watery point. Those on the forehead I repeatedly rolled under my finger, and pressed them hard against the bone; the others I took between my thumb and finger, as well as rolled them under the finger; the only sensation was a little fulness or rising of the part.

Saturday, Jan. 26. Quite comfortable, tongue clean, asking food. The eruptions a little more prominent, not increased in number. On examining them in the same manner I had the night before, a few presented a hard base, and two or three a vesicated point. Sent him to the hospital.

Sunday, Jan. 27. As comfortable as yesterday; pustules increased, I should judge, to nearly an hundred, principally on the trunk, a few on the limbs, some in the face, all of which had a hard base, and soon most of them a watery point.

Monday and Tuesday, Jan. 28 and 29. A few more pock made their appearance; the older ones increasing in size, conical, never rounding or flattening, or having the silvery hue, as in variola.

Wednesday, Jan. 30. Patient dressed, and walking about the room, as he had been every day since he came to the hospital. The older pock had formed the scab; the disease had arrived at its acme, and from this time began to decline; no secondary fever, no offensive breath, sore throat, or nauseous fetor; with the exception of the symptoms, as mild a disease (if this be a fair sample) as that of varicella.

This disease has been named varioloid, unfortunately as we think, as it leads to error. The word varioloid, from its derivation, means resemblance or likeness to variola; conveying the idea that it is another and different disease, when we are convinced that it is one and the same, modified, to be sure, yet as far as it proceeds is variola itself.

We view it as a kind of smallpox abortion; evidently of the same species, but checked in its growth, and prevented from coming to maturity by a deficiency of the variolous material in the system, to nourish and support it. Its early symptoms are the same, only less severe; the pustules come forth about the same time, having the same distinguishing marks, secrete the same virus, and communicate to the unprotected the genuine smallpox. Why does it die in this green, unripe state? What could so change and modify this formidable disease? Evidently this—the system had been previously impregnated by vaccine or variola. There is plenary testimony that those who have had smallpox, the natural way even, are liable to, and actually have this disease, as well as those who have had kinepock. The reason is obvious; some constitutions are so susceptible, that once having either disease does not wholly protect the system from a second attack, and they are consequently liable to the same disease in a mild and modified form. Will not a second inoculation of the kinepock wholly destroy this susceptibility in the system, and protect those who submit to it from varioloid? We are strongly of opinion that it will, and have many facts to prove it, which we shall present when treating of the test inoculation.

The perfect protection from variola by proper vaccination, and from varioloid by a second, or what I shall term test inoculation; also the length of time, after exposure to smallpox, during which the vaccine can step in, control, overpower and completely vanquish that terrible disease, will be shown by a statement of facts relative to those who were exposed to the contagion in the cases heretofore described.

In the family of Mrs. A. (with the exception of herself, who had

previously had variola, and now removed from her house, resigning it to the sick and exposed), were nine grown persons; eight of whom remained there during Cook's entire sickness, death and burial—all exposed as much as possible to the contagion from its commencement. All but two had previously had kinepock, and one of these two supposed she had had it, having been vaccinated twenty-five years before by a person not a physician, and had a sore arm. I was perfectly satisfied, by the appearance of the arm now vaccinated, that the former was other than the true disease, as the latter was as perfect, in every stage, as any one I ever witnessed. The other one had a good arm, having, as she was certain, never before been inoculated, and had no appearance of a vaccine scar about her. Of these nine persons, then, two had, as they informed me, had it twice, or been previously tested; five tested now, for the first time; and two, as the result proved, never had had it before. These were all vaccinated with the scab, on Saturday evening, Jan. 12, the day Cook's disease was pronounced variola; and again all (but the two who had been tested) were vaccinated on the Monday evening following, with fresh matter, this being as soon as the fresh matter could be obtained, and then in so small a quantity that I could not spare a quill to those who had been tested. The inoculation of Saturday mostly failed, entirely in the two who were wholly unprotected, but that of Monday evening took effect in all.

Monday evening, Jan. 14, the time the vaccine took effect, will, if you compare dates, prove that five and a half days had expired since I discovered the efflorescence, and six full days, if the nurse tells truly (which I have no reason to doubt), who avers that she perceived it the evening before. That evening I did not visit the patient. All these persons, notwithstanding the great and constant exposure, came out uninjured, not one exhibiting the slightest symptom even of varioloid.

H. Austin and sister watched with Cook on Friday night, Jan. 11. He is the person who had varioloid. His wife spent the same evening in the sick man's room, and then returned to her family of two young children, one a nursling. Austin, wife and sister, were vaccinated with the scab the same Saturday night as the others. This inoculation failed in both Austin and wife, but took effect in the sister. On the following Monday evening I re-vaccinated the wife, and vaccinated the two children with fresh matter; the father preferring that, although it took every fresh quill I had, leaving none for him. The test inoculation of the sister, the perfect arms of the wife and children, protected them; and Austin himself was the only one, of all who had been exposed, that had not been tested, and he alone had varioloid.

To prevent the spread of smallpox, the superintendents of vaccination for the town of Dedham recommended a general vaccination throughout the town, in districts, at their several schoolhouses, as soon as a sufficiency of fresh vaccine matter could be procured. I vaccinated in what is termed the old parish, the one in which the smallpox existed, and advised those who had been vaccinated, and their arms pronounced perfect by the physician who had inoculated them, to be tested by another vaccination. In consequence of this recommendation, and the great alarm, I re-vaccinated, in the course of a week, upwards of a hundred, and

carefully inspected their arms. The following is the result of my observations. Their arms presented four different and distinct appearances, which, to make myself more clearly understood, I shall divide into four classes, and describe each separately. There were the greatest number in what I term the first class. The puncture, where the matter was inserted, presented, on the third or fourth day, a little pale red, conical tumor, somewhat resembling the true arm on the fourth day, but more conical and not so lively a red, and then gradually faded away, and in a few days was wholly gone. Some of this class merely showed the arm had taken, itched a little, and was gone.

The second class somewhat resembled a push boil, reddening immediately, that is, the same day of the introduction of the matter. The vesicle had a conical, and in some cases almost a sharp point, with a very irregular areola, looking very irritable and angry, and passing away the seventh or eighth day. Some of this class, however, were not so pointed, having the vesicle larger, but very irregular; its areola continuing a little longer, and as it faded away itching intolerably.

The third class somewhat resembled a carbuncle; it came forth not so rapidly as the last described, but much quicker than the true disease, and had little resemblance to it. The vesicle large, oval rather than pointed; its areola irregular, of a dark-red chilblain appearance, continuing longer than those of the second class, passing away about the ninth or tenth day, having a large, thick, semicircular scab.

The fourth class resembled very nearly the true vaccine vesicle. It came forward in the same slow, gradual manner; on the completion of the seventh day, it required an experienced and practised eye to distinguish the false from the true. At this age the vesicle was well formed and perfectly regular, not quite so large, and more abrupt at its edges; having a stiff appearance, as if cast in a mould. Its surface was nearly flat, never conical, sometimes slightly concave. It wanted that soft, distended, rounded margin, with the decided concave, cup-like depression, of the true vesicle. Its areola appeared a little earlier, commencing on one side, and not regularly all around the vesicle; of rather dark hue, and never so perfectly and beautifully irradiated, or having its brightness so gradually diminished, as the true areola has. It advanced now more rapidly, the arm was sores and more painful, the constitutional symptoms quite as strong, and in some instances I thought more severe. It formed its scab on the twelfth or thirteenth day, which was less transparent and turtle-shell-like than the genuine. Of this class there were about twenty in the number I tested, which was a little over a hundred, making a proportion of nearly one fifth. We carried the experiment still farther, inoculating most of the fourth class again, and invariably producing an arm in every respect similar to those of the first class.

Among those who were tested, some had the kinepock thirty years ago; others I had vaccinated twenty-five years before, and from that time to the year last past. We found but one case of the fourth class among those who had been vaccinated twenty-five years and over; the other nineteen were scattered along, without having any regard to the time when the first inoculation had taken place.

Some physicians have supposed they could determine the validity of

the first inoculation, by the examination of the scar; when that appeared distinct, in form oval, with little star-like indentations, they were confident the system was fully protected, and another vaccination unnecessary. They are mistaken, we think, and the scar wholly deceptive; for in every case where we found an arm of the fourth class, we examined the scar, and found it in almost every instance with the appearance above described as indicating security.

From the foregoing statement of facts, we think we may fairly draw the following conclusions.

1st. That kinepock will take precedence and protect from smallpox, all who have been exposed to it six full days from the time of efflorescence, and five of the eruption.

2nd. That the test inoculation is all-important, and will wholly destroy the variolous susceptibility in the system, in all constitutions.

3d. That those in the test inoculation, described in the fourth class, would have had varioloid had the person been exposed to the smallpox previously to this vaccination.

4th. That length of time has no tendency to diminish the effect of kinepock in the prevention of smallpox.

5th. That the appearance of the scar is deceptive, and not in the least degree to be relied on.

We would also add that our confidence in vaccina is perfect, when it is repeated until the variolous susceptibility of the system is destroyed. As far as our experiments go, a second inoculation has proved sufficient; but it is possible that some constitutions may require more, and we therefore think it advisable to repeat the inoculation until the arm shows the system fully saturated.

We think the kinepock a better protection against varioloid, than smallpox the natural way or by inoculation. Our experiments, as far as the small number of eight prove it, are conclusive that the test inoculation completely protects the system from that disease, and we know of no remedy against it when persons have had variola.

Of all causes, the varioloid is one most likely to spread the smallpox throughout the land; a disease so mild, that after the symptoms have disappeared, the persons having it are able, in most cases, to be about their business; and at a time when they have, unconsciously, a contagion about them which would communicate that loathsome and fatal disease to the unprotected, should they come in contact—and the one receiving it be as unconscious of the source whence it came, as though it had been borne to him on the wings of the wind.

It behoves physicians, then, to be wary, to repeat and extend as far as necessary the test inoculation, and all other experiments pertaining to this subject, as opportunity offers; for it is demonstrably true, that to prevent smallpox we must prevent varioloid.

Dedham, February 10th, 1833.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, FEBRUARY 20, 1833.

NEW MEDICAL JOURNALS.

The spirit of improvement among members of the medical profession evidently exists in a greater degree than in times past, and promises to effect something, perhaps we may say much, for the good of mankind. In few branches of human industry is there a more fertile field than that in which the physician labors. Cases are continually presenting themselves in the practice of every one, that differ in important particulars from others that have occurred to him; and each case demands a scrutinizing eye and a well-stored mind, both to discern its precise character, and bend to its peculiar form the usual mode of treating similar complaints. For the accomplishment of these objects, the resources of the physician must be ample and at hand; and that he may not be at fault, he should cultivate habits not only of thinking, but of reading. His general professional knowledge must be kept up and advanced by an early acquaintance with the result of the researches of others; whilst an attentive examination of their experience, so far as it is accessible, will furnish him with a fund of precedents that will be a light and a consolation to him in meeting the ever-varying forms of disease that he must inevitably be called on to remove. It is in this last respect, as well as a means of general improvement, that medical men have found so much advantage from associating themselves in clubs, where each may relate, with minuteness and in confidence, any peculiar traits of disease that he shall have noticed; and to the profession at large, scattered as they are on this side the Atlantic, over the fair face of a wide country, a like benefit accrues from the circulation of medical journals. It is therefore a subject for congratulation, particularly with physicians who reside at a distance from each other, and have not the advantage of frequent association, when a new messenger is sent forth to bear the record of the experience of those who are engaged in the practice of the healing art.

Within the past year we have become acquainted with two works of this description, and the acquaintance is now perhaps of sufficiently long standing to justify us in speaking of their merits. One of these is a monthly Medical Magazine, published in this city, under the editorial care of Drs. Pierson, Bartlett, and Flint. It was commenced in July last, under favorable auspices, and such as ought, in our humble opinion, to attend the commencement of every work of a similar nature, designed to accomplish so important an end. The Journal in question did not come

out, as new periodicals are apt to, with all its glory on its front, and gradually become less and less attractive; but has improved as it has gone on, and contains, particularly the late numbers, much that may be read with interest and advantage by the medical practitioner. We trust that its progress onward in improvement and usefulness may be uniform and permanent. The other Journal alluded to is the Western Medical Gazette, published semi-monthly at Cincinnati, Ohio, and edited by Drs. Eberle, Mitchell, Staughton and Bailey. The variety of cases found in this periodical, and the practical bearing of most of its contents, are its principal characteristics. More perhaps needs not be said in its praise, after the remarks with which these brief notices are introduced.

There is a consistency to be maintained between the form and frequency of the publication of a Journal, and the nature of its contents. This consistency is very well sustained in both the above-mentioned works; so that the interest and value of the last are not diminished by the quarterlies that we receive regularly from Lexington and Cincinnati, and the contents of the first will be none the less novel or instructive to those who are in the habit of perusing periodicals of a lighter and more familiar character. A quarterly, a monthly, and a weekly, have each their own department in the dissemination of medical facts and opinions; and between them there is little if any more interference, than between a newspaper, a literary magazine, and a grave and reverend review. Works of each class are needed by the physician who would command the means of sustaining himself in the high ranks of the profession; whilst without them, the practitioner must depend too exclusively on his own personal observation, and will be apt to find himself at a mortifying distance behind his more enterprising brethren.

At the South, as well as the North and West, there are treasures of medical knowledge that are likely to be made serviceable to the profession. Dr. Slappey, of Twiggs County, Georgia, has issued proposals for publishing a bi-monthly of about 150 pages, under the title of the Georgia Medical Reporter. There is now, we believe, no Medical Journal in the Southern States; and it is a subject of congratulation that the deficiency is likely soon to be supplied. Dr. S., it seems, has harbored an intention to get up this work for the last six years. The spirit with which he now comes forward to consummate his purpose may be inferred from the following paragraph, which closes his Prospectus.

'Being fully convinced,' says Dr. S., 'and thoroughly persuaded of the propriety, usefulness, and absolute necessity, of such a work as the present contemplated one, I no longer hesitate, I vacillate no more, nor waver again; let the hazard be even greater than I conceive it to be; let the consequences fall with desolation on my head; let my fate be what it may, and discomfiture come when it will, I resolve to step forward, to the fulfilment of my object, to the performance of the work, and the arduous

duties which it necessarily imposes. I trust, however, with a due sense of modesty, yea with "fear and trembling," and yet with the spirit of a man—respecting all men's opinions as I respect my own—extending to others the same rights and privileges that I claim and reserve to myself.' J. G. S.

Since writing the foregoing notices we have received a single number, or rather a double number, of the Cholera Gazette. It is dated in November, and numbered 15 and 16. This is the first intimation we have received of the existence of such a periodical; and there is, in no part of it, any intimation of the place, frequency, or terms of its publication. We can only say that these numbers contain, besides several statistical documents, a very interesting and récherché Essay, on the Pathology of Cholera, originally read before the Philadelphia Medical Society by Dr. Isaac Hays, of that city.

TEMPERANCE PRIZE QUESTIONS.

With the laudable design of promoting the temperance reformation which has been so successfully commenced in the United States, the Pennsylvania State Temperance Society has united with several benevolent individuals, for the purpose of raising a sum, as a premium, to be awarded to the author of the best dissertation, embracing the following questions, viz.:—

1. *What is the history of the origin of* Ardent Spirit, *and of its introduction into medical practice?*

2. *What are its effects upon the animal economy? and*

3. *Is there any condition of the system, in health or disease, in which its use is indispensable, and for which there is not an adequate substitute?*

It is desirable that the premium should be at least $500, and efforts will be made to raise it to $1,000. At present, however, we are authorized to pledge a premium of but 300 dollars, which will be awarded in money, a gold medal, or in plate with a suitable inscription, at the option of the successful writer.

Dissertations must be transmitted, post paid, to the Rev. *W. W. Niles, New York City*, on or before the 1st of January, 1834. The dissertation should have upon its title page a device, or motto, corresponding with one, upon an accompanying sealed letter, containing the author's name, title and residence.

The seal of the letter accompanying the successful dissertation, only, will be broken; while all *others*, with their dissertations, will remain at the disposal of their authors.

The Board of Adjudicators consists of—

John C. Warren, M.D., Professor of Anatomy and Surgery, Harvard University, Boston.

Thomas Sewall, M.D., Professor of Anatomy and Physiology, Columbia College, Washington, D. C.

Robert Vaux, Esq., President of the Pennsylvania State Temperance Society, Philadelphia.

Parker Cleaveland, M.D., Professor of Chemistry and Materia Medica, Bowdoin College, Maine.

Vanburgh Livingston, Westchester Co., N. Y.

Benjamin Silliman, M.D., Professor of Chemistry, Yale College, New Haven, Con.

Francis Wayland, D.D., President of Brown University, Providence, Rhode Island.

William Goodell, Senior Editor of the 'Genius of Temperance,' New York City.

Rev. W. W. Niles, Secretary of the Board.

Cheap Substitute for Quinine.—The extreme dearness of this article—the well-known remedy for the cure of ague—and perhaps the only infallible specific that medicine affords, has set many inquirers to work, in order to discover some substitute of equal virtue, but within the means of the poorer classes affected with intermittents. M. Magendie, who was entrusted by the Academy of Sciences with the task of performing a series of experiments for the purpose of ascertaining the virtues of the powder of the leaves of holly (*ilex aquifolium*), has just returned a very favorable report. He tried it largely in numerous cases of ague committed to his charge in the Hôtel Dieu; and in consequence of his report, the gold medal of the Academy, value 1500 fr., has been awarded to M. Rousseau, the discoverer, 'for having added to the materia medica an indigenous remedy, which will be found to be of the greatest value wherever agues are endemic and the natives poor.'

Legalization of Anatomy in Maine.—A bill is now before the Legislature of Maine providing for the legalization of the study of anatomy. We shall be pleased, in case the bill shall become a law, if some of our friends at Augusta will favor us with a copy of it as finally approved by the Executive.

Boylston Medical Society of Harvard University.—At a late annual meeting of this Society, the following officers were duly elected:—John C. Howard, M.D. President; Marshall S. Perry, M.D. Vice President; Nathaniel B. Shurtleff, A.B. Secretary; Stephen Salisbury, A.B. Treasurer; George C. Shattuck, M.D. George Hayward, M.D. Walter Channing, M.D., Z. B. Adams, M.D. John Ware, M.D., W. Lewis, M.D., Trustees. The prize was awarded to John Appleton, for his Dissertation 'On the Structure and Functions of the Medulla Spinalis.'

Dr. North's Work on Spotted Fever.—We understand that Dr. Elisha North, of New London, Conn., has ready for the press, a new and improved edition of his Treatise on Spotted Fever, to which are added remarks on the Malignant Cholera.

The Communications of 'A. P. M.' and 'J. K. L.' have been received.

Whole number of deaths in Boston for the week ending Feb. 16, 26. Males, 20—Females, 16. Of croup, 1—throat distemper, 1—infantile, 4—consumption, 9—diarrhœa, 1—scarlet fever, 2—child-bed, 1—burn, 1—dropsy on the brain, 2—lung fever, 3—apoplexy, 1—hooping cough, 1—intemperance, 1—bleeding at the lungs, 1—affection of the brain, 1—jaundice, 1—inflammation of the lungs, 1—bowel complaint, 1.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

IS PRINTED AND PUBLISHED EVERY WEDNESDAY, BY CLAPP AND HULL,

At 154 Washington Street, corner of Franklin Street, to whom all communications must be addressed, *Post-paid*. It is also published in Monthly Parts, on the 1st of each month, each Part containing the numbers of the preceding month, stitched in a cover.—Price $3.00 per annum in advance, $3.50 if not paid within six months, and $4.00 if not paid within the year.—*Postage the same as for a newspaper.*